

REMARKS

Reconsideration and allowance of the above-referenced application are respectfully requested.

I. STATUS OF THE CLAIMS

Claim 17 is cancelled herein without prejudice or disclaimer.

Claims 1-16 and 18-26 are amended herein.

In view of the above, it is respectfully submitted that claims 1-16 and 18-26 are currently pending and under consideration in the present application.

II. OBJECTION TO THE SPECIFICATION

In item 2, on page 2 of the Office Action, claims 4 and 11 are "objected to." Claims 4 and 11 are amended herein.

In view of the above, it is respectfully submitted that the rejection is overcome.

III. REJECTION OF CLAIMS 1-7, 18, 19, 21 AND 24 UNDER 35 U.S.C. §102(B) AS BEING ANTICIPATED BY HIROTA (US 5,291,294)

The present invention as recited in claim 1 (as amended herein), relates to a solid-state imaging element, comprising "a plurality of light-receiving sensors converting optical signals to electrical signals, the plurality of light-receiving sensors arranged in $v \times h$ (vertical x horizontal) matrix" and "a memory storing the electrical signals as optical image data, said memory being formed of a plurality of line buffers, and the number of the plurality of line buffers is less than v ." Thus, in the present invention, the number of line buffers is less than the number of light-receiving sensors arranged toward a vertical direction.

Hirota teaches a CCD that has a plurality of storage register sections 38. In Hirota, however, the number of the plurality of storage register sections 38 is the same as the number of the photoelectric converting sections 32 arranged toward a vertical direction.

In contrast to Hirota, the number of line buffers in the present invention is less than the number of the storage register sections 38 of Hirota, thus the present invention can supply a more size-reduced CCD than Hirota's CCD. Therefore, Hirota does not teach the features recited in claim 1 of the present invention.

Claims 5, 18, 19, 21, and 24 recite similar features as recited in claim 1. Therefore, Hirota also does not teach the features recited in claims 5, 18, 19, 21, and 24 of the present invention.

Claims 2-4 and claims 6 and 7 depend from claims 1 and 5, respectively. For at least the reason that claims 1 and 5 distinguish over Hirota, it is submitted that claims 2-4, 6, and 7 also distinguish over Hirota.

In view of the above, it is respectfully submitted that the rejection is overcome.

IV. REJECTION OF CLAIMS 22 AND 25 UNDER 35 U.S.C. §102(B) AS BEING ANTICIPATED BY MORIMOTO (US 5,969,759)

Claim 22 (as amended herein) relates to a charge-coupled device (CCD), comprising “an array of photosensors arranged in v vertical lines and horizontal lines corresponding to an $n \times v$ pixel array of image data, each horizontal line being divided into k line sections, each line section corresponding to m ($m < k$) pixels of image data, and the array of photosensors arranged in $v \times h$ (vertical \times horizontal) matrix” and “a plurality of k line buffers, each line buffer holding up to m pixels of image data, and the number of the line buffers is less than v , wherein blocks of $n \times m$ pixels of image data are transferred from the array of photosensors to the line buffers, such that a first one of the buffers receives m pixels from a horizontal line and outputs the m pixels before receiving another m pixels from the next horizontal line and so forth until a first block of $n \times m$ pixels has been transferred and output, and repeating the transfer and output operations for each remaining line buffer and the remaining image data.”

Morimoto teaches a solid state image sensing device. However, Morimoto fails to teach the features recited in claim 22 of the present invention.

Claim 25 recites similar features as recited in claim 22. Therefore, Morimoto also fails to teach the features recited in claim 25 of the present invention.

In view of the above, it is respectfully submitted that the rejection is overcome.

V. REJECTION OF CLAIMS 8-17 UNDER 35 U.S.C. §103(A) AS BEING UNPATENTABLE OVER HIROTA (US 5,291,294) IN VIEW OF JUE (US 5,818,524)

The comments in section III above, also apply here.

In view of the above, it is respectfully submitted that the rejection is overcome.

VI. REJECTION OF CLAIMS 20, 23 AND 26 UNDER 35 U.S.C. §103(A) AS BEING UNPATENTABLE OVER HIROTA (US 5,291,294) IN VIEW OF ACIU ET AL. (US 5,625,412)

The comments in section III above, also apply here.

In view of the above, it is respectfully submitted that the rejection is overcome.

VII. CONCLUSION


In view of the foregoing amendments and remarks, it is respectfully submitted that each of the claims patentably distinguishes over the prior art, and therefore defines allowable subject matter. A prompt and favorable reconsideration of the rejection along with an indication of allowability of all pending claims are therefore respectfully requested.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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